

REMARKS

Claims 1-9, 11-13, 21, 22, 26 and 27 are pending.

Claims 1-9, 11-13, 21, 22, 26 and 27 are rejected.

No new matter is added.

Claims 1-9, 11-13, 21, 22, 26 and 27 remain in the case for reconsideration.

Applicants request reconsideration and allowance of the claims in light of the following remarks.

Examiner Interview Summary

An Examiner Interview was conducted on Wednesday, October 13. Examiner Samuel Admassu Gebremariam, Supervising Examiner Eddie Lee and James Hilsenteger, representing the applicant, participated in the phone interview. In the interview, Examiner Gebremariam was asked how the admitted prior art (“APA”) inherently teaches an etching stopping layer as he stated in the Office Action dated June 30, 2004. It was pointed out that the APA does not disclose an etch stopping layer and thus does not disclose patterning the capping layer and interconnection layer with an etch stopping layer. It was also pointed out that Urano does not disclose patterning interconnection and capping layers. After a brief discussion, Supervising Examiner Lee agreed that the APA does not inherently teach an etch stopping layer and therefore does not disclose patterning the capping and interconnection layers using an etch stopping layer.

Claim Rejections-35 USC § 103

Claims 1, 2, 4-9, 12-13, 21-22 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art in view of JP patent No. 11077507 to Urano (“Urano”). Applicant respectfully traverses the rejections.

Independent claim 1 recites forming an etch stopping layer as a third material layer above a first interconnection material layer and a second capping material layer. Claim 1 further recites patterning the first and second material layers by patterning the third material layer for stopping etching and then using the patterned third material layer to pattern the first and second material layers.

The admitted prior art (“APA”) does not disclose a patterned etch stopping layer and thus does not disclose patterning the interconnection and capping layers using a patterned etch stopping layer. Urano may disclose an etch stopping layer of nitride film 8, but does not

pattern the underlying layers 1 and 2 with this etch stopping layer. In fact, the Al wiring layer 1 and antireflection film 2 are not patterned at all in Urano.

Consequently, the combination of the APA and Urano fails to disclose the patterning of the interconnection and capping layers with a patterned etch stopping layer, and thus fails to disclose each and every element of independent claim 1.

Independent claim 1 is thus believed to be allowable over the combination of the APA and Urano and allowance is respectfully requested.

Claims 2, 4-9, 12-13, and 21-22 depend from claim 1 and for at least the same reasons these claims are believed to be allowable and allowance is respectfully requested.

Independent claim 26 recites forming a third etch stopping layer over first and second material layers, patterning the etch stopping layer and then patterning the first and second material layers by using the patterned etch stopping layer. The arguments presented above regarding independent claim 1 apply to independent claim 26 for the same reasons. Thus claim 26 is believed to be allowable over the combination of the APA and Urano and allowance is respectfully requested.

Claim 27 depends from independent claim 26 and for at least the same reasons, claim 27 is believed to be allowable and allowance is respectfully requested.

Claims 3 and 11, are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art and Urano in view of US patent No. 5,231,053 to Bost et al. (“Bost”).

Claims 3 and 11 depend from independent claim 1. The addition of Bost does not cure the shortcomings of the APA and Urano with respect to independent claim 1 because Bost does not disclose patterning the underlying layers by using a patterned etch stopping layer. Thus claims 3 and 11 are believed to be allowable over the combination of the APA, Urano and Bost and allowance is respectfully requested.

CONCLUSION

For the foregoing reasons, reconsideration and allowance of claims 1-9, 11-13, 21, 22, 26 and 27 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Customer No. 20575

Respectfully submitted,

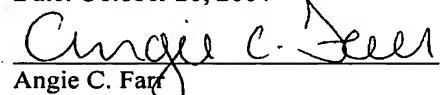
MARGER JOHNSON & McCOLLOM, P.C.



Hosoon Lee
Limited Recognition Under 37 CFR § 10.9(b)

MARGER JOHNSON & McCOLLOM, P.C.
1030 SW Morrison Street
Portland, OR 97205
503-222-3613

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment; Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
Date: October 26, 2004



Angie C. Faro